

REMARKS

Claim 14 is currently being amended, while new claim 27 is currently being added. Basis for the amendments to claim 14, as well as new claim 27, can be found on page 6, line 14 through page 8, line 2 in Applicant's specification.

The amendments presented herein do not introduce new matter within the meaning of 35 U.S.C. §132. Accordingly, the Examiner is respectfully requested to enter these amendments.

1. Rejection of Claims 14-26 Under 35 U.S.C. §102(e)/103(a) to

Pelliconi, et al. I

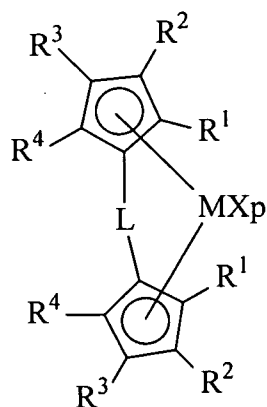
Applicant respectfully traverses the rejection of claims 14-26 as being anticipated under 35 U.S.C. §102(e), or alternatively, as being unpatentable under 35 U.S.C. §103(a) with respect to U.S. Patent Application Publication 2006/0047071 (herein referred to as "Pelliconi, et al. I").

Anticipation:

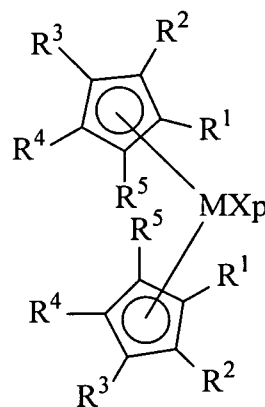
For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the

claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicant is currently claiming propylene polymer compositions comprising components (a), (b), and (c), wherein component (c) is obtained by a process comprising at least one metallocene compound of formula (I) or (II):



(I)



(II)

wherein

M is a transition metal belonging to group 4, 5 or to the lanthanide or actinide groups of the Periodic Table of Elements;

X, equal to or different from each other, are monoanionic sigma ligands selected from the group consisting of hydrogen, halogen, R⁶, OR⁶, OCOR⁶, SR⁶, NR⁶₂ and PR⁶₂, or two X can optionally form a substituted or unsubstituted butadienyl

radical or a OR'O group;

R' is a divalent radical selected from C₁-C₂₀ alkylidene, C₆-C₄₀ arylidene, C₇-C₄₀ alkylarylidene and C₇-C₄₀ arylalkylidene radicals;

R⁶ is a linear or branched, saturated or unsaturated C₁-C₂₀ alkyl, C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkylaryl or C₇-C₂₀ arylalkyl group, and optionally comprise at least one Si or Ge atom;

p is an integer equal to the oxidation state of M minus 2;

L is a divalent bridging group selected from C₁-C₂₀ alkylidene, C₃-C₂₀ cycloalkylidene, C₆-C₂₀ arylidene, C₇-C₂₀ alkylarylidene, or C₇-C₂₀ arylalkylidene radicals optionally comprising at least one heteroatom belonging to groups 13-17 of the Periodic Table of Elements, and silylidene radicals comprising up to 5 silicon atoms such as SiMe₂, SiPh₂; and

R¹, R², R³, R⁴ and R⁵, equal to or different from each other, are hydrogen, halogen, or linear or branched, saturated or unsaturated C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl, or C₇-C₂₀-arylalkyl radicals, optionally comprising at least one heteroatom belonging to groups 13-17 of the Periodic

Table of Elements; or two adjacent R^1 , R^2 , R^3 , R^4 and R^5 form at least one substituted or unsubstituted 3-7 membered ring optionally comprising at least one heteroatom belonging to groups 13-17 of the Periodic Table of Elements.

Alternatively, Pelliconi, et al. I discloses polyolefin compositions comprising components 1) and 2), wherein components 1) and 2) are prepared by Zeigler-Natta catalysts. In fact, paragraph [0033] of Pelliconi, et al. discloses,

Such polymerization is preferably carried out in the presence of stereospecific **Ziegler-Natta catalysts**. **An essential component** of said catalysts is a solid catalyst component comprising **a titanium compound having at least one titanium-halogen bond**, and an electron-donor compound, both supported on a magnesium halide in active form. Another essential component (co-catalyst) is an organoaluminum compound, such as an aluminum alkyl compound. (Emphasis added)

Accordingly, Applicant respectfully believes the compositions disclosed in Pelliconi, et al. I are physically different, and have physically different properties than those currently claimed by Applicant. For this reason alone, Applicant respectfully believes the instant rejection should be withdrawn.

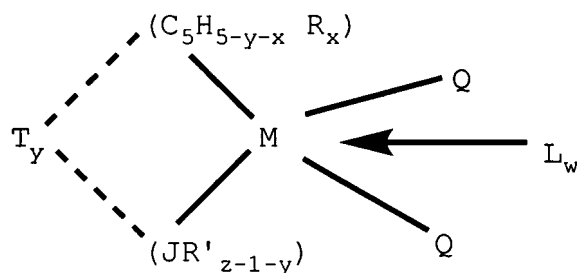
Applicant notes on page 7, line 17 through page 8, line 4 (i.e., paragraph 18), in the current Office Action, the Examiner states,

The composition disclosed by Pelliconi comprises a copolymer of ethylene with one or more C_4 - C_{10} α -olefins and a copolymer of propylene and ethylene, corresponding to components (b) and (c) in the instant claim, respectively. Pelliconi discloses that these copolymers may be prepared via polymerization using a metallocene catalyst. Pelliconi further states that these catalysts

disclosed in WO 91/04257 may be in the polymerization reaction (¶0050). The Examiner notes that WO 91/04257 teaches the use of metallocene catalysts comprising a cyclopentadienyl moiety which is Π -bonded to a central titanium atom. Pelliconi therefore teaches the use of the catalysts described in the instant claim for the polymerization of the ethylene/ α -olefin copolymer and the propylene/ethylene copolymer.

However, WO 91/04257 discloses **monocyclopentadienyl** complexes for polymerization catalysts. In fact, page 5, line 7 through page 6, line 18 of WO 91/04257 discloses, in part,

The 'Group IV B transition metal component' of the catalyst system is represented by the formula:



wherein:

(JR'_{z-1-y}) is a **heteroatom ligand** in which J is an element with a coordination number of three from Group V A or an element with a coordination number of two from Group VI A of the Periodic Table of Elements, preferably nitrogen, phosphorus, oxygen or sulfur, (Emphasis added)

Therefore, in light of the above, Applicant respectfully believes the anticipation rejection to Pelliconi, et al. I should be withdrawn.

Obviousness:

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148

U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Notwithstanding, the currently claimed invention and the subject matter contained in Pelliconi, et al. I are commonly owned, and Applicant was subject to an obligation of assignment to the owner of the Pelliconi, et al. I patent application at the time the claimed invention was made. Applicant has included herein as Attachment B (i) a copy of the Recordation of Assignment for the currently pending application, and (ii) a copy of the assignee of record for the Pelliconi, et al. I from the U.S. Patent Office Assignment database. Therefore, in light of the above, Applicant respectfully believes the obviousness rejection to Pelliconi, et al. I should be withdrawn.

In light of the above, Applicant respectfully believes claims 14-27 are patentably distinct over Pelliconi, et al. I. As such, Applicant respectfully requests the Examiner to withdraw the current rejections.

2. Rejection of Claims 14-26 Under 35 U.S.C. §102(a)/103(a) to
Pelliconi, et al. II

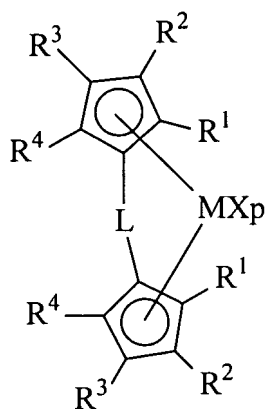
Applicant respectfully traverses the rejection of claims 14-26 as being anticipated under 35 U.S.C. §102(a), or alternatively, as being unpatentable under 35 U.S.C. §103(a) with respect to WO 03/051984 (herein referred to as "Pelliconi, et al. II").

Anticipation:

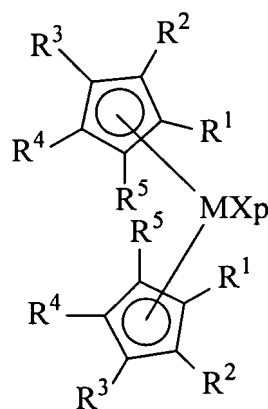
For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Arguments regarding Pelliconi, et al. I (i.e., U.S. Patent Application publication US 2006/0047071) are incorporated herein by

reference in their entirety. As outlined *supra*, Applicant is currently claiming propylene polymer compositions comprising components (a), (b), and (c), wherein component (c) is obtained by a process comprising at least one metallocene compound of formula (I) or (II):



(I)



(II)

wherein

M is a transition metal belonging to group 4, 5 or to the lanthanide or actinide groups of the Periodic Table of Elements;

X, equal to or different from each other, are monoanionic sigma ligands selected from the group consisting of hydrogen, halogen, R⁶, OR⁶, OCOR⁶, SR⁶, NR⁶₂ and PR⁶₂, or two X can optionally form a substituted or unsubstituted butadienyl radical or a OR'O group;

R' is a divalent radical selected from C₁-C₂₀ alkylidene, C₆-C₄₀ arylidene, C₇-C₄₀ alkylarylidene and C₇-C₄₀ arylalkylidene radicals;

R⁶ is a linear or branched, saturated or unsaturated C₁-C₂₀ alkyl, C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkylaryl or C₇-C₂₀ arylalkyl group, and optionally comprise at least one Si or Ge atom;

p is an integer equal to the oxidation state of M minus 2;

L is a divalent bridging group selected from C₁-C₂₀ alkylidene, C₃-C₂₀ cycloalkylidene, C₆-C₂₀ arylidene, C₇-C₂₀ alkylarylidene, or C₇-C₂₀ arylalkylidene radicals optionally comprising at least one heteroatom belonging to groups 13-17 of the Periodic Table of Elements, and silylidene radicals comprising up to 5 silicon atoms such as SiMe₂, SiPh₂; and

R¹, R², R³, R⁴ and R⁵, equal to or different from each other, are hydrogen, halogen, or linear or branched, saturated or unsaturated C₁-C₂₀-alkyl, C₃-C₂₀-cycloalkyl, C₆-C₂₀-aryl, C₇-C₂₀-alkylaryl, or C₇-C₂₀-arylalkyl radicals, optionally comprising at least one heteroatom belonging to groups 13-17 of the Periodic Table of Elements; or two adjacent R¹, R², R³, R⁴ and R⁵ form at least one substituted or unsubstituted 3-7 membered ring

optionally comprising at least one heteroatom belonging to groups 13-17 of the Periodic Table of Elements.

Alternatively, as with Pelliconi, et al. I, Pelliconi, et al. II discloses polyolefin compositions comprising components 1) and 2), wherein components 1) and 2) are prepared by Zeigler-Natta catalysts. In fact, page 3 of Pelliconi, et al. discloses,

Such polymerization is preferably carried out in the presence of stereospecific **Ziegler-Natta catalysts**. **An essential component** of said catalysts is a solid catalyst component comprising **a titanium compound having at least one titanium-halogen bond**, and an electron-donor compound, both supported on a magnesium halide in active form. Another essential component (co-catalyst) is an organoaluminum compound, such as an aluminum alkyl compound. (Emphasis added)

Accordingly, Applicant respectfully believes the compositions disclosed in Pelliconi, et al. II are physically different, and have physically different properties than those currently claimed by Applicant. For this reason alone, Applicant respectfully believes the instant rejection should be withdrawn.

As with Pelliconi, et al. I, Applicant notes on page 7, line 17 through page 8, line 4 (i.e., paragraph 18), as well as on page 10, paragraph 22 in the current Office Action, the Examiner states,

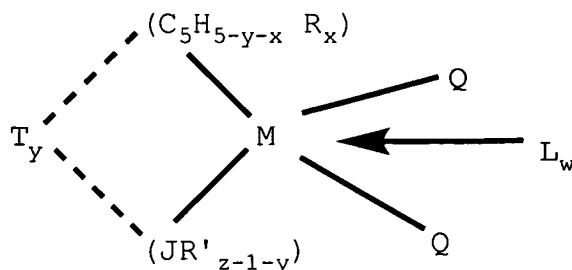
The composition disclosed by Pelliconi comprises a copolymer of ethylene with one or more C₄-C₁₀ α -olefins and a copolymer of propylene and ethylene, corresponding to components (b) and (c) in the instant claim, respectively. Pelliconi discloses that these copolymers may be prepared via polymerization using a metallocene catalyst. Pelliconi further states that these catalysts disclosed in WO 91/04257 may be in the polymerization reaction (\P 0050). The Examiner notes that WO 91/04257 teaches the use of metallocene catalysts comprising a cyclopentadienyl moiety which is Π -bonded to a central

titanium atom. Pelliconi therefore teaches the use of the catalysts described in the instant claim for the polymerization of the ethylene/ α -olefin copolymer and the propylene/ethylene copolymer.

Claims 14-26 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 03/051984, published on 06/26/2003. The examiner notes that WO 03/051984 is the publication of PCT/EP02/14068. As Pelliconi et al, US20060047071 is the publication of the National Phase entry in the United States of PCT/EP02/14068, WO 03/051984 and Pelliconi contain the same disclosure. The examiner therefore notes that the instant claims would be unpatentable over the disclosure of WO 03/051984 under the same rationale as outlined in paragraphs 5-21 of this Office Action regarding rejection of the claims over Pelliconi.

However, as outlined *supra*, WO 91/04257 discloses **monocyclopentadienyl** complexes for polymerization catalysts. In fact, page 5, line 7 through page 6, line 18 of WO 91/04257 discloses, in part,

The 'Group IV B transition metal component' of the catalyst system is represented by the formula:



wherein:

(JR'_{z-1-y}) is a **heteroatom ligand** in which J is an element with a coordination number of three from Group V A or an element with a coordination number of two from Group VI A of the Periodic Table of Elements, preferably nitrogen,

phosphorus, oxygen or sulfur, (Emphasis added)

Therefore, in light of the above, Applicant respectfully believes the anticipation rejection to Pelliconi, et al. II should be withdrawn.

Obviousness:

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Arguments above regarding Pelliconi, et al. I and Pelliconi, et al. II are incorporated herein by reference in their entirety.

With respect to the instant rejection to Pelliconi, et al. II,

not only does Applicant respectfully believe Pelliconi, et al. II fails to disclose, teach, or suggest Applicant's currently claimed propylene polymer compositions, but Applicant also respectfully believes there is no suggestion or motivation to modify Pelliconi, et al. II in order to try and arrive at Applicant's currently claimed propylene polymer compositions. However, this is the Examiner's initial burden to establish a *prima facie* case of obviousness. See MPEP §2141 and §2142.

In light of the above, Applicant respectfully believes claims 14-27 are patentably distinct over Pelliconi, et al. II. As such, Applicant respectfully requests the Examiner to withdraw the current rejections.

3. Rejection of Claims 14-25 Under 35 U.S.C. §102(b)/103(a) to
Tanaka, et al.

Applicant respectfully traverses the rejection of claims 14-25 as being anticipated under 35 U.S.C. §102(b), or alternatively, as being unpatentable under 35 U.S.C. §103(a) with respect to U.S. Patent 5,115,030 (herein referred to as "Tanaka, et al.").

First and foremost, Applicant respectfully notes previously pending claim 26 was not rejected as being anticipated, nor was claim 26 rejected as being rendered obvious to Tanaka, et al. Therefore, Applicant respectfully believes currently pending claim 14 is neither anticipated nor rendered unpatentable over Tanaka, et al. given previously pending claim 26 recites, in part,

. . . wherein component b) is obtained by polymerizing ethylene and one or more C₂-C₂₀ alpha olefins in presence of a metallocene compound comprising at least one cyclopentadienyl moiety which is π -bonded to a central metal, and component c) is obtained by polymerizing propylene and ethylene in presence of a metallocene compound comprising at least one cyclopentadienyl moiety which is π -bonded to a central metal.

As noted above, for a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Additionally, the U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Applicant respectfully believes Tanaka, et al. fails to disclose, teach, or suggest Applicant's currently claimed propylene polymer compositions, and as with Pelliconi, et al. I and Pelliconi, et al. II, Applicant respectfully believes there was no motivation or suggestion to modify Tanaka, et al. at the time of filing of Applicant's instant application to try and arrive at Applicant's currently claimed propylene polymer compositions. For these reasons, Applicant respectfully believes the current rejections should be withdrawn.

In light of the above, Applicant respectfully believes claims 14-27 are not anticipated by, and are patentably distinct over Tanaka, et al. As such, Applicant respectfully requests the Examiner to withdraw the current rejections.

CONCLUSION

Based upon the above remarks, the presently claimed subject matter is believed to be novel and patentably distinguishable over the prior art of record. The Examiner is therefore respectfully requested to reconsider and withdraw all pending rejections, and

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allow pending claims 14-27. Favorable action with an early allowance of the claims pending in this application is earnestly solicited.

In order to advance prosecution on the above-identified application, the Examiner is welcomed to telephone the undersigned practitioner if he has any questions or comments.

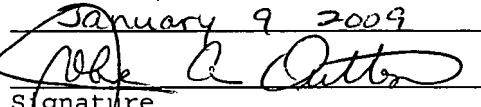
Respectfully submitted,

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Date